

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A diagnostic blown fuse indicator for a fuse having both a short circuit element and a current overload element, comprising:

 a short circuit indicator in electrical communication with the short circuit element, wherein the short circuit indicator provides visual indication of a short circuit condition; and

 a current overload indicator in electrical communication with the current overload element, wherein the current overload indicator provides visual indication of an overload condition;

 wherein at least a portion of the short circuit indicator, at least a portion of the current overload indicator, the short circuit element and the current overload element are coupled together as a unit that is inserted into a protective housing, at least one of the elements and indicators configured and arranged to be electrically connected after insertion to at least one conductive end of the housing, the conductive end exposed and configured to be connected removably to a mating connector.

2. (original) The blown fuse indicator of Claim 1, further comprising:

 a transparent lens secured to the fuse, wherein both the short circuit indicator and the current overload indicator are visible through the lens.

3. (original) The blown fuse indicator of Claim 1, further comprising:

 a plurality of transparent lenses secured to the fuse, wherein each of the short circuit indicators and the current overload indicators is respectively visible through one of the plurality of lenses.

4. (original) The blown fuse indicator of Claim 1, wherein the short circuit indicator is coated with a chemical composition which vaporizes upon a short circuit condition.
5. (original) The blown fuse indicator of Claim 1, wherein the current overload indicator is coated with a chemical composition which vaporizes upon a current overload condition.
6. (original) The blown fuse indicator of Claim 1, wherein the short circuit indicator includes gun cotton and an igniter wire in contact with the gun cotton.
7. (original) The blown fuse indicator of Claim 1, wherein the current overload indicator includes gun cotton and an igniter wire in contact with the gun cotton.
8. (original) The blown fuse indicator of Claim 1, wherein the short circuit indicator includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.
9. (original) The blown fuse indicator of Claim 1, wherein the current overload indicator includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.
10. (original) The blown fuse indicator of Claim 1, wherein the short circuit indicator includes a highly resistive substance electrically communicating with a light emitting diode.
11. (previously presented) The blown fuse indicator of Claim 1, wherein the current overload indicator includes a highly resistive substance electrically communicating with a light emitting diode.

12. (currently amended) A fuse having a short circuit element in electrical communication with a current overload element, comprising:

a short circuit indicator and a current overload indicator connected electrically to a point between a high electrical resistance area of the short circuit element and the current overload element, and

a tubular housing sized to receive through an end thereof the elements and at least portions of the indicators, the housing also sized to receive ~~exposed~~ conductive ends, the ends connected electrically with the elements and exposed and configured to be connected electrically and removably with a mating connector.

13. (original) The fuse of Claim 12, wherein the short circuit indicator is electrically communicating in parallel with the short circuit element.

14. (original) The fuse of Claim 12, wherein the current overload indicator is electrically communicating in parallel with the current overload element.

15. (original) The fuse of Claim 12, wherein the overload element is electrically communicating in series with the short circuit element.

16. (original) The fuse of Claim 12, wherein the overload element includes a solder piece in electrical communication with the short circuit element.

17. (original) The fuse of Claim 12, wherein the short circuit element defines a slot for creating the high resistance area.

18. (previously presented) The fuse of Claim 12, wherein the short circuit indicator and the current overload indicator electrically communicate with multiple conductive ends of the fuse.

19. (original) The fuse of Claim 12, wherein the short circuit indicator includes gun cotton and an igniter wire in contact with the gun cotton.

20. (original) The fuse of Claim 12, wherein the current overload indicator includes gun cotton and an igniter wire in contact with the gun cotton.

21. (original) The fuse of Claim 12, wherein the short circuit indicator includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.

22. (original) The fuse of Claim 12, wherein the current overload indicator includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.

23. (previously presented) A fuse having both a short circuit element and a current overload element, comprising:

 a short circuit indicator electrically communicating in parallel with the short circuit element, wherein the short circuit indicator is coated with a chemical composition that is adapted to vaporize after a short circuit occurs;

 a current overload indicator electrically communicating in parallel with the current overload element, wherein the overload indicator is coated with a chemical composition that is adapted to vaporize after a current overload occurs; and

 a single, rigid body that houses the short circuit element, current overload element, short circuit indicator and current overload indicator, wherein, (i) the body is fixed to conductive end caps that are exposed and configured to be fitted to mating connectors, (ii) the elements and indicators communicate electrically with the end caps, and (iii) the body defines at least one opening sized and shaped for a person to view both indicators located within.

24. (previously presented) The fuse of Claim 23, which includes a viewing area that changes visually when the short circuit element opens and when the current overload element opens.
25. (previously presented) The fuse of Claim 23, which includes a first viewing area that changes visually when the short circuit element opens and a second viewing area that changes visually when the current overload element opens.
26. (previously presented) A fuse having diagnostic blown fuse indication comprising:
 - a short circuit element having an area of higher electrical resistance between conductive ends, the area tending to open upon a short circuit;
 - a time delay element communicating electrically with one of the ends of the short circuit fuse element, the time delay element opening due to a current overload;
 - a short circuit indicator operating in parallel with the short circuit element;
 - a current overload indicator operating in parallel with the time delay element; and
 - a single, rigid body that houses the short circuit element, time delay element, short circuit indicator and current overload indicator, wherein, (i) the body is fixed to conductive end caps that are exposed and configured to be fitted to mating connectors, (ii) the elements and indicators communicate electrically with the end caps, and (iii) the body defines at least one opening sized and shaped for a person to view both indicators located within.
27. (previously presented) The fuse of Claim 23, wherein the current overload element is electrically communicating in series with the short circuit element.
28. (previously presented) The fuse of Claim 26, wherein the short circuit indicator is electrically communicating in parallel with the short circuit element.
29. (previously presented) The fuse of Claim 26, wherein the current overload indicator is electrically communicating in parallel with the time delay element.

30. (previously presented) The fuse of Claim 26, wherein the time delay element is electrically communicating in series with the short circuit element.
31. (previously presented) The fuse of Claim 26, wherein at least one of the indicators includes gun cotton and an igniter wire in contact with the gun cotton.
32. (previously presented) The fuse of Claim 26, wherein at least one of the indicators is coated with a chemical composition that vaporizes upon a fault condition.